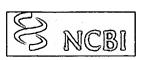
## **WEST Search History**

Hide Items	Restore	Clear	Cancel
That items	11031010	Oicai	Caricei

DATE: Tuesday, October 24, 2006

Hide?	Set Name	Query	Hit Count				
	DB=PGPB, USA	PT,USOC,EPAB,JPAB,DWPI;	PLUR=YES; OP=ADJ				
	L4	L3 and (ctl epitope)	5				
	L3	L2 and ctl	33				
	L2	L1 and epitope	124				
	L1	mesothelin	170				

END OF SEARCH HISTORY





## A service of the National Library of Medicine and the National Institutes of Health

My NCBI [Sign In] [Regi:

All Databases PubMed Nucleotide Structure **OMIM PMC** Journals Genome Boo Protein Search PubMed for epitope and mesothelin Cli Preview Go History Preview/Index Clipboard **☑** Limits Details

## Limits: Publication Date to 2002/7/12

About Entrez

Text Version

Entrez PubMed Overview Help | FAQ Tutorials

New/Noteworthy E-Utilities

PubMed Services
Journals Database
MeSH Database
Single Citation Matcher
Batch Citation Matcher
Clinical Queries
Special Queries
LinkOut
My NCBI

Related Resources
Order Documents
NLM Mobile
NLM Catalog
NLM Gateway
TOXNET
Consumer Health
Clinical Alerts
ClinicalTrials.gov
PubMed Central

• Search History will be lost after eight hours of inactivity.

- Search numbers may not be continuous; all searches are represented.
- To save search indefinitely, click query # and select Save in My NCBI.
- To combine searches use #search, e.g., #2 AND #3 or click query # for more options.

Search	Most Recent Queries	Time	Result
<u>#4</u>	Search epitope and mesothelin Limits: Publication Date to 2002/7/12	10:06:30	2
<u>#3</u>	Search t cell and epitope and mesothelin Limits: Publication Date to 2002/7/12	10:06:25	<u>0</u>
<u>#2</u>	Search ctl epitope and mesothelin Limits: Publication Date to 2002/7/12	10:06:16	0
<u>#1</u>	Search ctl epitopes and mesothelin Limits: Publication Date to 2002/7/12	10:06:12	0

Clear History

Write to the Help Desk

NCBI | NLM | NIH

Department of Health & Human Services

Privacy Statement | Freedom of Information Act | Disclaimer

Oct 17 2006 07:23:06

Welcome to STN International! Enter x:x

LOGINID: SSPTALAB1643

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

```
Web Page URLs for STN Seminar Schedule - N. America
NEWS
                "Ask CAS" for self-help around the clock
NEWS
                INSPEC enhanced with 1898-1968 archive
NEWS
        AUG 09
                ADISCTI Reloaded and Enhanced
NEWS 4
        AUG 28
                CA(SM)/CAplus(SM) Austrian patent law changes
NEWS 5
        AUG 30
        SEP 11 CA/CAplus enhanced with more pre-1907 records
NEWS 6
        SEP 21
                CA/CAplus fields enhanced with simultaneous left and right
NEWS 7
                truncation
                CA(SM)/CAplus(SM) display of CA Lexicon enhanced
NEWS
    8
        SEP 25
                CAS REGISTRY(SM) no longer includes Concord 3D coordinates
NEWS 9
        SEP 25
                CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
NEWS 10
        SEP 25
                CEABA-VTB classification code fields reloaded with new
NEWS 11
        SEP 28
                classification scheme
                LOGOFF HOLD duration extended to 120 minutes
NEWS 12
        OCT 19
        OCT 19
                E-mail format enhanced
NEWS 13
                Option to turn off MARPAT highlighting enhancements available
NEWS 14
        OCT 23
                CAS Registry Number crossover limit increased to 300,000 in
NEWS 15
       OCT 23
                multiple databases
                The Derwent World Patents Index suite of databases on STN
NEWS 16
        OCT 23
                has been enhanced and reloaded
```

NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8
NEWS X25 X.25 communication option no longer available

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 15:24:00 ON 24 OCT 2006

=> file caplus, bioeng, biotechno, biotechds, esbiobase

COST IN U.S. DOLLARS

SINCE FILE
ENTRY
SESSION

FULL ESTIMATED COST

TOTAL

0.21

0.21

FILE 'CAPLUS' ENTERED AT 15:24:27 ON 24 OCT 2006 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOENG' ENTERED AT 15:24:27 ON 24 OCT 2006 COPYRIGHT (C) 2006 Cambridge Scientific Abstracts (CSA)

FILE 'BIOTECHNO' ENTERED AT 15:24:27 ON 24 OCT 2006 COPYRIGHT (C) 2006 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'BIOTECHDS' ENTERED AT 15:24:27 ON 24 OCT 2006 COPYRIGHT (C) 2006 THE THOMSON CORPORATION

FILE 'ESBIOBASE' ENTERED AT 15:24:27 ON 24 OCT 2006 COPYRIGHT (C) 2006 Elsevier Science B.V., Amsterdam. All rights reserved.

=> s (ctl epitope) and mesothelin L1 3 (CTL EPITOPE) AND MESOTHELIN

=> duplicate remove l1

DUPLICATE PREFERENCE IS 'CAPLUS, ESBIOBASE'

KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L1

L2 2 DUPLICATE REMOVE L1 (1 DUPLICATE REMOVED)

=> d 12 bib abs 1-2

- L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
- AN 2005:972433 CAPLUS
- DN 144:168317
- TI Identification of Novel Human CTL Epitopes and Their Agonist Epitopes of Mesothelin
- AU Yokokawa, Junko; Palena, Claudia; Arlen, Philip; Hassan, Raffit; Ho, Mitchell; Pastan, Ira; Schlom, Jeffrey; Tsang, Kwong Y.
- CS Laboratories of Tumor Immunology and Biology, National Cancer Institute, NIH, Bethesda, MD, USA
- SO Clinical Cancer Research (2005), 11(17), 6342-6351 CODEN: CCREF4; ISSN: 1078-0432
- PB American Association for Cancer Research
- DT Journal
- LA English
- Purpose: Mesothelin is overexpressed in many pancreatic and AB ovarian cancers, mesotheliomas, and other tumor types. Clin. trials are ongoing using immunotoxins to target mesothelin, and patients immunized with allogeneic pancreatic tumor cell lines have shown immune responses to previously defined mesothelin epitopes. The purpose of this study was to define novel mesothelin CTL epitopes and, more importantly, agonist epitopes that would more efficiently activate human T cells to more efficiently lyse human tumors. Exptl. Design and Results: Two novel mesothelin HLA-A2 epitopes were defined. T-cell lines generated from one of these epitopes were shown to lyse pancreatic and ovarian tumor cells. Several agonist epitopes were defined and were shown to (a) have higher affinity and avidity for HLA-A2, (b) activate mesothelin-specific T cells from normal individuals or cancer patients to a greater degree than the native epitope in terms of induction of higher levels of IFN- $\gamma$  and the chemokine lymphotactin, and (c) lyse several mesothelin -expressing tumor types in a MHC-restricted manner more effectively than T cells generated using the native peptide. External beam radiation of tumor cells at nontoxic levels was shown to enhance the expression of mesothelin and other accessory mols., resulting in a modest but statistically significant increase in tumor cell lysis by mesothelin-specific T cells. Conclusions: The identification of

novel CTL agonist epitopes supports and extends observations that mesothelin is a potential target for immunotherapy of pancreatic and ovarian cancers, as well as mesotheliomas.

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
L2
     2000:240985 CAPLUS
ΑN
     132:292701
DN
     Novel methods for therapeutic vaccination
TI
     Steinaa, Lucilla; Mouritsen, Soren; Nielsen, Klaus Gregorious; Haaning,
IN
     Jesper; Leach, Dana; Dalum, Iben; Gautam, Anand; Birk, Peter; Karlsson,
     Gunilla
     M & E Biotech A/S, Den.
PA
     PCT Int. Appl., 220 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LΑ
FAN.CNT 1
                         KIND
                                            APPLICATION NO.
                                                                    DATE
                                DATE ·
     PATENT NO.
                                             -----
                         _ - - -
                                · - - - - - - -
     -----
                                                                    19991005
PΙ
     WO 2000020027
                          A2
                                20000413
                                            WO 1999-DK525
                          A3
                                20001012
     WO 2000020027
            AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD,
             MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
             SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                20000413
                                           CA 1999-2345817
                                                                    19991005
                          AA
     CA 2345817 ·
                                .20000426
                          A1
                                            AU 1999-58510 .
                                                                    19991005
     AU 9958510
     AU 751709
                          B2
                                 20020822
                          A2
                                 20010725
                                             EP 1999-945967
                                                                     19991005
     EP 1117421
                          В1
                                 20040616
     EP 1117421
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, IE, SI,
             LT, LV, FI, RO
     TR 200100936
                          Т2
                                 20010821
                                             TR 2001-200100936
                                                                     19991005
                          T2
                                 20020820
                                             JP 2000-573386
                                                                     19991005
     JP 2002526419
                                 20021015
                                             EE 2001-203
                                                                     19991005
     EE 200100203
                          Α
                          Α
                                 20031031
                                             NZ 1999-511055
                                                                     19991005
     NZ 511055
                          E
                                             AT 1999-945967
                                                                     19991005
     AT 269100
                                 20040715
     PT 1117421
                          T
                                 20041130
                                             PT 1999-945967
                                                                     19991005
                          T3
                                             ES 1999-945967
                                                                     19991005
     ES 2222728
                                 20050201
                          A2
                                             EP 2004-76709
                                                                     19991005
     EP 1502602
                                 20050202
                          A3
                                 20060517
     EP 1502602
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL
                                 20010531
                                             NO 2001-1586
                                                                     20010328
     NO 2001001586
                          Α
     ZA 2001002603
                          Α
                                 20020930
                                             ZA 2001-2603
                                                                     20010329
                          B1
                                 20060228
                                             US 2001-806703
                                                                     20010430
     US 7005498
                          Al
                                 20020630
                                             HR 2001-319
                                                                     20010504
     HR 2001000319
     US 2004141958
                          Al
                                 20040722
                                             US 2003-441779
                                                                     20030519
     US 2006008465
                          Al
                                 20060112
                                             US 2005-202516
                                                                     20050811
PRAI DK 1998-1261
                          Α
                                 19981005
                          P
                                 19981020
     US 1998-105011P
     EP 1999-945967
                          A3
                                 19991005
     US 1999-413186
                          A1
                                 19991005
     WO 1999-DK525
                          W
                                 19991005
```

AB A method is disclosed for inducing cell-mediated immunity against cellular antigens. More specifically, the invention provides for a method for inducing cytotoxic T-lymphocyte immunity against weak antigens, notably

20010430

A3

US 2001-806703

self-proteins. The method entails that antigen presenting cells are induced to present at least one CTL epitope of the weak antigen and at the same time presenting at least one foreign T-helper lymphocyte epitope. In a preferred embodiment, the antigen is a cancer specific antigen, e.g. prostate specific membrane antigen (PSM), Her2, or FGF8b. The method can be exercised by using traditional polypeptide vaccination, but also by using live attenuated vaccines or nucleic acid vaccination. The invention furthermore provides immunogenic analogs of PSM, Her2 and FGF8b, as well as nucleic acid mols. encoding these analogs. Also vectors and transformed cells are disclosed. The invention also provides for a method for identification of immunogenic analogs of weak or non-immunogenic antigens.

=> dhis

Ll

DHIS IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> display history ENTER (BRIEF), FULL, OR NOFILE:full ENTER (L1-), L#, OR ?:l1

(FILE 'CAPLUS, BIOENG, BIOTECHNO, BIOTECHDS, ESBIOBASE' ENTERED AT 15:24:27 ON 24 OCT 2006)

3 SEA ABB=ON PLU=ON (CTL EPITOPE) AND MESOTHELIN

FILE HOME

FILE CAPLUS

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 24 Oct 2006 VOL 145 ISS 18 FILE LAST UPDATED: 23 Oct 2006 (20061023/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

http://www.cas.org/infopolicy.html

FILE BIOENG

FILE LAST UPDATED: 20 OCT 2006 <20061020/UP>
FILE COVERS 1982 TO DATE

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN.
THE BASIC INDEX <<<

FILE BIOTECHNO

FILE LAST UPDATED: 7 JAN 2004 <20040107/UP>
FILE COVERS 1980 TO 2003.

>>> BIOTECHNO IS NO LONGER BEING UPDATED AS OF 2004 <<<

```
>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
          /CT AND BASIC INDEX <<<
    FILE BIOTECHDS
    FILE LAST UPDATED: 19 OCT 2006
                                         <20061019/UP>
    FILE COVERS 1982 TO DATE
    >>> USE OF THIS FILE IS LIMITED TO BIOTECH SUBSCRIBERS <<<
    FILE ESBIOBASE
    FILE LAST UPDATED: 24 OCT 2006
                                         <20061024/UP>
    FILE COVERS 1994 TO DATE.
         SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
         /CC, /ORGN, AND /ST <<<
=> s mesothelin and vaccine and epitope
           16 MESOTHELIN AND VACCINE AND EPITOPE
L3
=> duplicate remove 13
DUPLICATE PREFERENCE IS 'CAPLUS, BIOENG, BIOTECHNO, BIOTECHDS, ESBIOBASE'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L3
            10 DUPLICATE REMOVE L3 (6 DUPLICATES REMOVED)
L4
=> d l4 bib abs 1-10
    ANSWER 1 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
L4
ΑN
    2006:736122 CAPLUS
DN
    145:187049
    Rhabdoviral N nucleoprotein fusion proteins as vaccine carriers
TI
     for foreign antigens
    Schnell, Matthias; Dietzschold, Bernhard
IN
    Thomas Jefferson University, USA
PΑ
SO
    PCT Int. Appl., 110 pp.
    CODEN: PIXXD2
    Patent
DT
    English
LA
FAN.CNT 1
                                          APPLICATION NO.
                                                                  DATE
     PATENT NO.
                       KIND
                               DATE
                               -----
                                           ------
                        ----
     ______
                               20060727
                                         WO 2005-US13298
                                                                  20050419
     WO 2006078272
                         A2
PΙ
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
             NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,
             SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
             ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,
             CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM,
             KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG,
             KZ, MD, RU, TJ, TM
PRAI US 2004-563380P
                         Р
                                20040419
     Rabies virus (RV) nucleoprotein (N) tightly encapsidates the genomic and
     antigenomic RNA thereby forming the ribonucleoprotein (RNP) complex.
     Antigens presented in a rigid and repetitive organization are sufficient
     to activate B cells to proliferate. In addition to the repetitive
     organization, RV N protein induces potent T-helper responses resulting in
     long-lasting and strong humoral immune responses against RV. The
     possibility to directly manipulate the genome of RV allow examination of
     whether the immunogenicity of foreign antigens can be enhanced via
     incorporation into the RNP structure. A recombinant RV expressing an RV
```

N-green fluorescent protein (GFP) fusion protein was constructed. The chimeric N-GFP fusion protein was efficiently expressed and incorporated into RV RNP and virions. Moreover, the recombinant RNP induces a strong humoral immune response against GFP in mice. In contrast, mice inoculated with GFP alone or a combination of wild-type RV RNPs and GFP did not trigger any GFP-specific humoral responses using the same immunization schedule. These results indicate the usefulness of RV-based vectors as killed vaccines against other infectious diseases. N-fusions with anthrax protective antigen domain 4 (amino acid residues 596-935) and a 51-residue ectodomain fragment of RV glycoprotein G are described, as well as fusions with the botulin A HC50 domain.

```
ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
L4
     2006:13388 CAPLUS
ΑN
DN
     144:106603
     Preselected profile of tumor-associated antigens for cancer diagnosis and
TI
     match of immunotherapeutic agent with various types of cancers
     Chiang, Chih-Sheng; Simard, John J. L.
IN
     Mannkind Corporation, USA
PA
SQ
     PCT Int. Appl., 104 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LΑ
FAN.CNT 2
                                               APPLICATION NO.
                                                                        DATE
                         KIND
                                  DATE
     PATENT NO.
                         ----
                                  _____
                                               ______
     _____
     WO 2006002114 A2
WO 2006002114 A3
                                  20060105
                                              WO 2005-US21836
                                                                        20050617
ΡI
     WO 2006002114
                          A3
                                  20061005
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
              NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
              ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM,
              KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG,
              KZ, MD, RU, TJ, TM
                        A1
                                                                        20051229
     US 2006159689
                                  20060720
                                              US 2005-323964
                           P
                                  20040617
PRAI US 2004-580969P
                          A2
                                  20050617
     US 2005-155288
                          A
     WO 2005-US21836
                                  20050617
     Disclosed herein are methods for matching a cancer condition with an
AB
     appropriate immunotherapeutic agent and/or regimen. Also disclosed are
     methods for confirming diagnosis of a particular type of cancer.
     Embodiments of the invention disclosed herein are directed to the use of
     effective combinations of Tumor-associated antigens to optimize the match
     between a patient's cancer condition and available immunotherapies.
     ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
L4
AN
     2005:141117 CAPLUS
     142:238652
DN
     Antibodies specific to mesothelin splice variant mesovt2 isoform
ΤI
     and conjugates for treating cancer
     Ebel, Wolfgang; Grasso, Luigi; Nicolaides, Nicholas E.; Sass, Philip M.
IN
     Morphotek, Inc., USA
PA
     PCT Int. Appl., 47 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
```

KIND DATE

PATENT NO.

APPLICATION NO.

DATE

```
WO 2004-US25558
                                20050217
                                                                   20040805
ΡI
     WO 2005014652
                         A1
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
            AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
                                20050217
                                            AU 2004-263514
                                                                   20040805
     AU 2004263514
                          A1
                          AA
                                20050217
                                            CA 2004-2534659
                                                                   20040805
     CA 2534659
                                            US 2004-912922
                                                                   20040805
     US 2005054056
                          A1
                                20050310
                                            EP 2004-780400
                                                                   20040805
     EP 1651675
                         A1
                                20060503
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
                        P
                                20030805
PRAI US 2003-493040P
                          Р
                                20030912
     US 2003-502715P
                          W
                                20040805
     WO 2004-US25558
     The protein and nucleic acid sequences of mesovt2, specific antibodies
     thereto, methods for targeting and/or inhibiting the growth of cells
     bearing mesovt2, and methods of use of mesovt2 for diagnosing malignancy
     are provided. Methods of use of the mesovt2 antibodies in the treatment
     of certain cancers, particularly cancers that have increased cell surface
     expression of the mesovt2 antigen, such as pancreatic adenocarcinoma, lung
     carcinoma, and ovarian cancer, also are provided. The invention also
     relates to cells expressing the monoclonal antibodies, derivs., and
     fragments.
              THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 8
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
L4
AN
     2004:60244 CAPLUS
DN
     140:133789
     Mesothelin target for antitumor vaccines and model
ΤI
     Jaffee, Elizabeth; Wu, Tzyy-Choou; Hung, Chien-Fu; Hruban, Ralph
IN
     The Johns Hopkins University, USA
PA
SO
     PCT Int. Appl., 89 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
                                            APPLICATION NO.
                                                                   DATE
                         KIND
                                DATE
     PATENT NO.
                                            -----
                                -----
     ______
                         ----
                                20040122
                                            WO 2003-US21643
                                                                   20030714
     WO 2004006837
                         A2
ΡI
     WO 2004006837
                         A3
                                20060518
             AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                                                                   20030714
                                20040122
                                            CA 2003-2492160
     CA 2492160
                          AA
                          A1
                                20040202
                                            AU 2003-259109
                                                                   20030714
     AU 2003259109
     US 2005175625
                                            US 2003-618088
                                                                   20030714
                          A1
                                20050811
                                            EP 2003-764462
                                                                   20030714
     EP 1575500
                          A2 .
                                20050921
```

-----

```
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
                                20060921
                          T2
                                            JP 2005-505117
                                                                    20030714
     JP 2006521090
PRAI US 2002-395556P
                          Р
                                20020712
                          Р
     US 2002-398217P
                                20020724
                          Р
                                20020930
     US 2002-414931P
                          Р
     US 2003-475783P
                                20030605
                          W
                                20030714
     WO 2003-US21643
     Mesothelin can be used as an immunotherapeutic target. It
AB
     induces a cytolytic T-cell response. Portions of mesothelin
     which induce such responses are identified. Vaccines can be
     either polynucleotide- or polypeptide-based. Carriers for raising a
     cytolytic T-cell response include bacteria and viruses. A mouse model for
     testing vaccines and other anti-tumor therapeutics and
     prophylactics comprises a strongly mesothelin-expressing,
     transformed peritoneal cell line.
      ANSWER 5 OF 10 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
L4
AN
      2005-01788 BIOTECHDS
      New isolated Listeria bacterium attenuated for entry into non-phagocytic
TI
      cells and having a nucleic acid molecule encoding a non-Listerial
      antigen, useful for treating cancer, HIV and hepatitis B;
         attenuated mutant bacterium for use in disease therapy and
         vaccine
      DUBENSKY T W; BROCKSTEDT D G; COOK D
AU
      DUBENSKY T W; BROCKSTEDT D G; COOK D
PA
      US 2004228877 18 Nov 2004
PΙ
ΑI
      US 2004-773792 6 Feb 2004
PRAI
      US 2004-773792 6 Feb 2004; US 2003-446051 6 Feb 2003
DT
      Patent
LA
      English
os
      WPI: 2004-813211 [80]
      2005-01788 BIOTECHDS
AN
AB
      DERWENT ABSTRACT:
```

NOVELTY - An isolated Listeria bacterium which is attenuated for entry into non-phagocytic cells and comprises a nucleic acid molecule encoding a non-Listerial antigen, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a vaccine comprising the attenuated Listeria bacterium cited above, or the strain of (6), and a carrier or adjuvant; (2) a method of inducing an immune response in a host to a non-Listerial antigen, comprising administering to the host a composition comprising the attenuated Listeria bacterium cited above or the strain of (6); (3) a method of preventing or treating a disease in a host, comprising administering to the host a composition comprising the attenuated Listeria bacterium cited above or the strain of (6); or comprising contacting a Listeria bacterium with an antigen-presenting cell from the host, where the bacterium is attenuated for entry into non-phagocytic cells and comprises a nucleic acid molecule encoding the antigen, and administering the antigen-presenting cell to the host; (4) a professional antigen-presenting cell comprising the attenuated Listeria strain cited above or the strain of (6); (5) an immunogenic composition comprising the attenuated Listeria bacterium cited above or the strain of (6); (6) a strain selected from Listeria monocytogenes DELTAactADELTAinlB strain deposited with ATCC with Accession Number PTA-5562, or a mutant of the deposited strain which is defective both with respect to internalin B and ActA; (7) a professional antigen-presenting cell comprising the Listeria bacterium cited above or the strain of (6); and (8) a method of inducing MHC class I antigen presentation or MHC class II antigen presentation on an antigen-presenting cell, comprising contacting a Listeria bacterium with an antigen-presenting cell, where the bacterium is attenuated for entry into non-phagocytic cells and comprises a nucleic acid molecule encoding a non-Listerial antigen comprising an MHC class I or II epitope.

BIOTECHNOLOGY - Preferred Bacterium: The attenuated Listeria bacterium is further attenuated for cell-to-cell spread, and comprises at least one mutation in one or more gene selected from actA, IpIA, plcA, plcB, mpl and hly. The bacterium also comprises a mutation in actA. The nucleic acid of the bacterium has been modified by reaction with a nucleic acid targeting compound so that proliferation of the bacterium is attenuated, or by contact with a psoralen activated by UVA irradiation. The attenuated bacterium is defective with respect to one or more internalins, preferably with respect to internalin B. The bacterium further comprises a mutation in the inlB gene, and is further attenuated for cell-to-cell spread, and belongs to the species Listeria monocytogenes. The antigen is a tumor-associated antigen or derived from a tumor-associated antigen, selected from mesothelin, sp17, PAGE-4, gp-100, PSMA, K-ras, TARP, proteinase 3, WT-I, NY-ESO-I, CEA, Her-2, and SPAS-1. The antigen is an infectious disease antigen or is derived from an infectious disease antigen.

ACTIVITY - Cytostatic; Anti-HIV; Virucide; Hepatotropic. Test details are described but no results given.

MECHANISM OF ACTION - Vaccine.

USE - The methods and compositions of the present invention are useful for attenuating Listeria bacterium in vaccine compositions for treating or preventing cancer, HIV and hepatitis B.

ADMINISTRATION - Routes of administration of the pharmaceutical compositions include oral, intramuscular, intraperitoneal, intravenous, intralymphatic, intradermal or intranasal. No dosages given.

EXAMPLE - Listeria strains with in-frame deletions of the indicated genes were generated by SOE-PCR and allelic exchange, and were derived from 10403S. The mutant strain LLOL461T (DP-L4017) and the DELTAactA mutant were cured of its prophage. A splice overlap extension PCR was used to prepare the construct for the allelic exchange procedure. In the primary PCR reactions, approximately 1000 bp of sequence upstream and downstream from the Listeria inlB gene 5' and 3' ends, respectively, were amplified. (64 pages)

- L4 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
- AN 2004:644778 CAPLUS
- DN 141:378541
- TI Mesothelin-specific CD8+ T cell responses provide evidence of in vivo cross-priming by antigen-presenting cells in vaccinated pancreatic cancer patients
- AU Thomas, Amy Morck; Santarsiero, Lynn M.; Lutz, Eric R.; Armstrong, Todd D.; Chen, Yi-Cheng; Huang, Lan-Qing; Laheru, Daniel A.; Goggins, Michael; Hruban, Ralph H.; Jaffee, Elizabeth M.
- CS Department of Oncology, The Sidney Kimmel Cancer Center, Johns Hopkins University, Baltimore, MD, 21231, USA
- SO Journal of Experimental Medicine (2004), 200(3), 297-306 CODEN: JEMEAV; ISSN: 0022-1007
- PB Rockefeller University Press
- DT Journal
- LA English
- Tumor-specific CD8+ T cells can potentially be activated by two distinct mechanisms of major histocompatibility complex class I-restricted antigen presentation as follows: direct presentation by tumor cells themselves or indirect presentation by professional antigen-presenting cells (APCs). However, controversy still exists as to whether indirect presentation (the cross-priming mechanism) can contribute to effective in vivo priming of tumor-specific CD8+ T cells that are capable of eradicating cancer in patients. A clin. trial of vaccination with granulocyte macrophage-colony stimulating factor-transduced pancreatic cancer lines was designed to test whether cross-presentation by locally recruited APCs can activate pancreatic tumor-specific CD8+ T cells. Previously, we reported postvaccination delayed-type hypersensitivity (DTH) responses to autologous tumor in 3 out of 14 treated patients. Mesothelin is an antigen demonstrated previously by gene expression profiling to be

up-regulated in most pancreatic cancers. We report here the consistent induction of CD8+ T cell responses to multiple HLA-A2, A3, and A24-restricted mesothelin epitopes exclusively in the three patients with vaccine-induced DTH responses. Importantly, neither of the vaccinating pancreatic cancer cell lines expressed HLA-A2, A3, or A24. These results provide the first direct evidence that CD8 T cell responses can be generated via cross-presentation by an immunotherapy approach designed to recruit APCs to the vaccination site.

THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 62 ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 7 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
L4
```

2002:332053 CAPLUS AN

DN 136:354178

Novel therapeutic vaccine formulations comprising microparticles TI of weak immunogenic antigen and chitosan

IN Beier, Anne Mette; Gautam, Anand; Mouritsen, Soren

Pharmexa A/S, Den. PA

PCT Int. Appl., 97 pp. SO

CODEN: PIXXD2

DT Patent

English LA

FAN.	CNT	1																
	PATENT NO.				KIND DATE			APPLICATION NO.						DATE				
PI	WO	2002034287			A2 20020502			WO 2001-DK705						20011026				
	WO	2002034287			A3 · 20030116									-				
		W:	ΑE,	AG,	AL,	AM,	ΑT,	AT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	ΒZ,	CA,	CH,
			CN,	CO,	CR,	CU,	CZ,	CZ,	DE,	DE,	DK,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,
			FI,	GB,	GD,	GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KΕ,	KG,	ΚP,
								LS,										
								PT,										
			TM,	TR,	TT,	TZ,	UA,	ŪĠ,	US,	UZ,	VN,	YU,	ZA,	ZW,	AM,	ΑZ,	BY,	KG,
				MD,														
		RW:						MZ,										
								GB,										BF,
			ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,	TG	
	AU 2002010407					A5 20020506				AU 2002-10407								
	US 2004037840					A1 20040226				1	US 2001-984092					20011026		
PRAI	DK	2000	-160	6		A		2000	1027									
	US	2000	-245	166P		P 20001103												
	DK	2001	-936			Α		2001	0618									
	WO	2001	-DK7	05		W		2001	1026									

The present invention relates to a novel method and formulation for the AB induction of immune responses against poorly immunogenic or non-immunogenic polypeptide antigens. In particular, the invention provides a method and formulation for induction of cytotoxic T cell responses against a polypeptide antigen of choice such as tumor antigen and autoantigen. The formulations are characterized by containing chitosan in admixt. with the polypeptide antigen, preferably in the form of microparticles that may be cross-linked. The polypeptide antigen also comprises T helper cell epitope, cytotoxic T lymphocyte epitope and/or B cell epitope.

- ANSWER 8 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN L4
- AN 2000:240985 CAPLUS
- DN 132:292701
- Novel methods for therapeutic vaccination TI
- Steinaa, Lucilla; Mouritsen, Soren; Nielsen, Klaus Gregorious; Haaning, Jesper; Leach, Dana; Dalum, Iben; Gautam, Anand; Birk, Peter; Karlsson, Gunilla
- M & E Biotech A/S, Den. PA
- PCT Int. Appl., 220 pp. CODEN: PIXXD2

```
DT
     Patent
LA
     English
FAN.CNT 1
                         KIND
                                            APPLICATION NO.
                                                                    DATE
     PATENT NO.
                                DATE
                                            -----
                         ----
                                _____
     _____
                                                                    19991005
                          A2
                                20000413
                                            WO 1999-DK525
     WO 2000020027
PI
                                20001012
     WO 2000020027
                         A3
            AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD,
             MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
             SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                20000413
                                            CA 1999-2345817
                                                                    19991005
     CA 2345817
                          AΑ
                                20000426
                                            AU 1999-58510
                                                                    19991005
     AU 9958510
                          A1
                          B2
                                20020822
     AU 751709
                                            EP 1999-945967
                                                                    19991005
                                20010725
     EP 1117421
                          A2
                          B1
                                20040616
     EP 1117421
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, IE, SI,
             LT, LV, FI, RO
                          T2
                                20010821
                                            TR 2001-200100936
                                                                    19991005
     TR 200100936
                          T2
                                20020820
                                            JP 2000-573386
                                                                    19991005
     JP 2002526419
                                            EE 2001-203
                                                                    19991005
                          Α
                                20021015
     EE 200100203
                                            NZ 1999-511055
                                                                    19991005
                         Α .
                                20031031
     NZ 511055
                         \mathbf{E}
                                20040715
                                            AT 1999-945967
                                                                    19991005
     AT 269100
                          Т
                                20041130
                                            PT 1999-945967
                                                                    19991005
     PT 1117421
                                            ES 1999-945967
     ES 2222728
                          Т3
                                20050201
                                                                    19991005
                                            EP 2004-76709
                                                                    19991005
                          A2
     EP 1502602
                                20050202
                          A3
                                20060517
     EP 1502602
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL
                                            NO 2001-1586
                                                                    20010328
                         Α
                                20010531
     NO 2001001586
                                            ZA 2001-2603
                                                                    20010329
                          Α
                                20020930
     ZA 2001002603
                                            US 2001-806703
                                                                    20010430
                          В1
                                20060228
     US 7005498
                                            HR 2001-319
                          A1
                                20020630
                                                                    20010504
     HR 2001000319
                         A1
                                20040722
                                            US 2003-441779
                                                                    20030519
     US 2004141958
                         A1
                                20060112
                                            US 2005-202516
                                                                    20050811
     US 2006008465
PRAI DK 1998-1261
                         A
                                19981005
                         P
     US 1998-105011P
                                19981020 -
                          A3
                                19991005
     EP 1999-945967
     US 1999-413186
                          Al
                                19991005
                          W
                                19991005
     WO 1999-DK525
     US 2001-806703
                          A3
                                20010430
     A method is disclosed for inducing cell-mediated immunity against cellular
```

Amethod is disclosed for inducing cell-mediated immunity against cellular antigens. More specifically, the invention provides for a method for inducing cytotoxic T-lymphocyte immunity against weak antigens, notably self-proteins. The method entails that antigen presenting cells are induced to present at least one CTL epitope of the weak antigen and at the same time presenting at least one foreign T-helper lymphocyte epitope. In a preferred embodiment, the antigen is a cancer specific antigen, e.g. prostate specific membrane antigen (PSM), Her2, or FGF8b. The method can be exercised by using traditional polypeptide vaccination, but also by using live attenuated vaccines or nucleic acid vaccination. The invention furthermore provides immunogenic analogs of PSM, Her2 and FGF8b, as well as nucleic acid mols. encoding these analogs. Also vectors and transformed cells are disclosed. The invention also provides for a method for identification of immunogenic analogs of weak or non-immunogenic antigens.

L4 ANSWER 9 OF 10 BIOENG COPYRIGHT 2006 CSA on STN DUPLICATE 5 AN 2004387447 BIOENG

DN 4656055

- Analysis of cloned Fvs from a phage display library indicates that DNA TI immunization can mimic antibody response generated by cell immunizations
- AU
- Chowdhury, PS; Pastan, I\*
  National Institutes of Health, National Cancer Institute, Laboratory of CS Molecular Biology, Building 37, Room 4B20, 37 Convent Road, MSC-4255 Bethesda, MD 20892 USA
- Journal of Immunological Methods [J. Immunol. Methods]. Vol. 231, no. SO 1-2, pp. 83-91. 10 Dec 1999. Published by: Elsevier ISSN: 0022-1759
- DT Journal
- LA English
- SLEnglish
- Immunology Abstracts; Medical and Pharmaceutical Biotechnology Abstracts OS
- AN 2004387447 BIOENG
- Generation and cloning of antibodies against cell surface antigens can be AB simplified by combining DNA immunization which enables generation of antibodies against a protein in its natural configuration without the need for any protein purification step and antibody phage display which due to its immense screening power and physical coupling between the phenotype and genotype of antibodies simplifies the cloning of antibody genes. Since DNA immunization is expected to elicit antibodies against a protein in its natural configuration, we wanted to see if it can mimic the antibody response generated by cell immunization. A phage display library made from splenic mRNA of a mouse immunized with mesothelin cDNA was panned on mesothelin-positive cells. The single-chain Fvs (scFvs) selected were then analyzed. We obtained several anti-mesothelin scFvs. One of these Fvs is almost identical to the Fv of a monoclonal antibody that was previously obtained from a hybridoma in which the mice were immunized with a mesothelin-positive ovarian cancer cell line. Another Fv was found to be specific for mesothelin present on human cells. Our results indicate that an antibody phage display library made from spleens of DNA-immunized mice is a rapid and efficient alternative to cell immunization for obtaining antibodies against different epitopes of a membrane antigen that is very difficult to purify in a native form.
- L4ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6
- ΑN 1998:61211 CAPLUS
- 128:166089 DN
- Isolation of a high-affinity stable single-chain Fv specific for ΤI mesothelin from DNA-immunized mice by phage display and construction of a recombinant immunotoxin with anti-tumor activity
- ΑU
- Chowdhury, Partha S.; Viner, Jaye L.; Beers, Richard; Pastan, Ira Laboratory of Molecular Biology, Division of Basic Sciences, National CS Cancer Institute, National Institutes of Health, Bethesda, MD, 20892-4255,
- Proceedings of the National Academy of Sciences of the United States of SO America (1998), 95(2), 669-674 CODEN: PNASA6; ISSN: 0027-8424
- PB National Academy of Sciences
- Journal DT
- LΑ English
- Mesothelin is a differentiation antigen present on the surface AB of ovarian cancers, mesotheliomas, and several other types of human cancers. Because among normal tissues, mesothelin is present only on mesothelial cells, it represents a good target for antibody-mediated delivery of cytotoxic agents. Here, mice were immunized with an eukaryotic expression vector coding for mesothelin. When high serum antibody titers were obtained, a phage display library was made from the splenic mRNA of these mice. After 3 rounds of panning on recombinant mesothelin, a single-chain Fv (scFv)-displaying phage was selected that bound specifically to recombinant mesothelin and mesothelin-pos. cells. The scFv was used

to construct an immunotoxin by genetically fusing it with a truncated mutant of Pseudomonas exotoxin A. The purified immunotoxin binds mesothelin with high affinity (Kd 11 nm), is stable for over 40 h at 37°, and is very cytotoxic to cells expressing mesothelin. It also produces regressions of tumors expressing mesothelin. This combination of selective cytotoxicity, high activity, and stability makes the immunotoxin a good candidate for development as a therapeutic agent. This work also shows that DNA immunization can be used to isolate and clone antibodies against epitopes present on human proteins in their native conformation.

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT